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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/799,090

03/12/2004

John M. Belcea

P2112US

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06/03/2005

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EXAMINER

AFSHAR, KAMRAN

ART UNIT

PAPER NUMBER

2681

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/799,090

Applicant(s)

BELCEA, JOHN M.

Examiner

Kamran Afshar, 571-272-7796

Art Unit

2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 12-17 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 4, 11 and 18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/30/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-10, 12-17, 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuffaro (U.S. Pub. No.: 2004/0203905 A1) in view of Wallentin (U.S. Patent 6, 594, 238 A1) further in view of Hunzinger (2002/0016173 A1).

With respect to claims 1, 8, 15, Cuffaro discloses a method, system, compute readable medium of instructions and / or a processor (See e.g. 16, 14, 20 of Fig. 1A, Page 1, Paragraph [0012]), for determining a location of a mobile communication device in a communication network (See e.g. a method, system and / or compute readable medium a WTRU's (i.e. vehicle phone, hand held cell, mobile phone/unit), the information is sent to the network to determine the WTRU's location, its direction of travel and a speed estimate, Page 1, Paragraph [0006]), the method comprising: estimating a location of the mobile communication device based on measured data (i.e. information, X, Y, Grid or Cartesian coordinates system) representing respective distances between the mobile communication device and a plurality of reference points (See e.g. Plurality of Sector-stations S1-SN, Page 1, Paragraph [0012], Page 2, Paragraphs [0016]-[0020], Equations -4). However, Cuffaro does not teach using a predictive filter including a forget factor which treats older measured data less significantly than newer measured data. In the same field of endeavor, Wallentin discloses another mobile communication device, method, and system with different schemes for keeping track of the mobile location (See i.e. mobility management, See e.g. Co. 1, Lines 35-58 and Co. 2, Lines 48-54). Further, Wallentin discloses using a predictive filter (See e.g. Co. 9, Line 66 – Co. 10, Line 3) including a forget factor which treats older measured data less

Art Unit: 2681

significantly than newer measured data (See e.g. Co. 10, Lines 27-34). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to provide above teaching of Wallentin to Cuffaro to facilitate plurality of predictive filter scheme (i.e. Kalman filter, a fuzzy, self-learning, etc) with a forgetting factor for treating the old data and less significant (i.e. the difference is reduced to the smallest value) the new data so that to update and or modify the parameters (See e.g. Wallentin, Co. 10, Lines 44-45). The motivation comes from, Hunzinger to generate and / or to modify estimated location representative of the location of the mobile communication device (See e.g. Page 1, last 10 lines of Paragraph [0011]).

Regarding claims 2, 9, 17, Cuffaro discloses predicts movement of the mobile communication device on three axes of coordinates (See e.g. Equations 1-5, Page 2, Paragraphs [0016]-[0023]).

Regarding claims 3, 10, 17, Cuffaro discloses the step predicts the movement using equations including variables representing the starting position of the mobile communication device and variables representing the moving speed of the mobile communication device (See e.g. P_n and P_{n-1} of Equation 11, Page 2, Paragraphs [0029]-[0032]).

Regarding claims 5, 12, 19, Hunzinger discloses the network includes a wireless ad-hoc peer-to-peer communication network (See e.g. Page 2, Paragraph [0014]).

Regarding claims 6, 13, 20, Hunzinger discloses the mobile communication device performs the estimating and modifying steps (See e.g. Page 1, last 6 Lines of Paragraph [0010]).

Regarding claims 7, 14, 21, Wallentin discloses the forget factor has a value between 0 and 1 (See e.g. Co. 10, Lines 38-39).

Allowable Subject Matter

3. Claims 4, 11, 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claim 11, the prior art of record fails to disclose or render obvious that each system pertaining to a respective axis of movement and employing the forget factor to adjust the

Art Unit: 2681

estimated starting position coordinate for that respective axis and speed of movement along that respective axis.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Standoff (U.S. Patent 6, 519, 464 B1)), which discloses Use Of Third Party Ultra Wideband Devices To Establish Geo-Positional Data.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (571) 272-7796. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, **Emmanuel Moise** can be reached @ (571) 272-3865. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306 for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kamran Afshar


EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER